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Authors

Malhotra, Atul
Liang, Ni-Cheng

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Introduction: American Thoracic Society International Meeting 2016

On May 14, 2016, over 17,400 people met in San Francisco, California for the American Thoracic Society (ATS) International Meeting. The ‘sphere’ of Twitter contacts during this 5-day meeting exceeded 40,000,000. The ATS is a large professional society focused on pulmonary, critical care and sleep medicine (www.thoracic.org). The ATS has two mottos “We help the world breathe” and “Where today’s science meets tomorrow’s care”. The 2016 meeting was a major success based on the number of participants, the quality of the science and clinical updates and the enthusiasm of all involved. Atul Malhotra, ATS President from 2015–2016, focused his presidency on the next generation (1,2), striving to attract and retain the best and brightest into the field. The ATS program included a number of programs for junior members, emphasizing the success of these initiatives (3). While there were many highlights from the meeting, this article will summarize three sessions which will likely be remembered for some time:

- (I) J. Craig Venter, PhD spoke at the opening ceremonies of the ATS. Dr. Venter gave a futuristic presentation regarding his vision for the future of healthcare. He reviewed the history of sequencing the human genome and how genomics may help to guide personalized medicine in the years to come. The presentation included initiatives to generate living cells from its chemical constituents, efforts to grow human tissues, and to regenerate organs which may be failing. Dr. Venter also discussed the Human Longevity Institute (HLI) which is a company he recently founded to provide concierge medical services to interested patients and to use new technology to guide treatments and prevention. Some viewed the presentation as ‘science fiction’ whereas others found it highly creative and inspiring. Regardless, the lecture generated considerable discussion which will undoubtedly continue during future ATS meetings;
- (II) President’s Symposium “Applied Physiology is Alive and Well”. Many people have implied that “physiology is dead” based on the advances that science has seen in various other avenues. However, many of the advances that have occurred in clinical medicine have been rooted in physiology, and applied physiology has been critical to measuring the improved outcomes associated with new therapies (4). The session began with Jeffrey M. Drazen, MD, Editor in Chief of the *NEJM*, reviewing the history of physiology, starting with the polio epidemic but then culminating in the major improvements in outcomes of patients with acute respiratory distress syndrome (ARDS) by applying physiological principles to guide mechanical ventilation (5,6). The session also included superb presentations by Magdy Younes, MD from Winnipeg on sleep apnea (new thoughts on mechanisms of arousal response and upper airway stabilization in sleep apnea) (7,8), Kevin Tracey, MD from New York (neurostimulation via vagal modulation to control inflammation) (9,10), Jeffrey Fredberg, PhD (cell jamming and epithelial cell interactions) (11), and Marcelo Amato, MD (lung stress and strain in ARDS) (12,13). The session was quite popular, in part due to the multidisciplinary nature of the cutting edge presentations;
- (III) Plenary Session. Katie Meyler, named in *TIME* magazine Person of the Year, was the special guest. Katie presented her experience in Liberia (<http://vimeo.com/117498731>) during the Ebola virus epidemic (14,15). Katie is a teacher who had been working in Liberia to improve the education of young girls growing up there. Katie started a charity called More Than Me which is focused on getting young girls off the street and into school. When the Ebola epidemic developed and many were evacuating Liberia, Katie flew back there to help care for the people of Liberia. She told a very compelling story with intense emotions regarding the various people with whom she interacted, many succumbing to Ebola virus during the height of the epidemic. Katie received standing ovations and was universally praised by a full ATS audience for her efforts and for her inspiring story.

The ATS 2016 meeting provided different things for various participants. The Clinical Year in Review and the Clinical Problems Assembly provided exciting content for practicing clinicians. The Keynote lecture series, summarized in this issue of *JTD*, covered a wide range of basic and clinical topics in respiratory medicine. The social gatherings provided a good venue for junior people to network and get involved. The next ATS meeting is in Washington DC in 2017 <http://conference.thoracic.org/program/call-for-input/index.php>, with many of us looking forward eagerly.

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Atul Malhotra



Ni-Cheng Liang

Atul Malhotra, MD

(Email: amalhotra@ucsd.edu)

Ni-Cheng Liang, MD

(Email: nliang@ucsd.edu)

Division of Pulmonary, Critical Care, and Sleep Medicine, University of California San Diego, La Jolla, CA, USA.

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Conflicts of Interest: Dr. Malhotra is PI on NIH RO1 HL085188, K24 HL132105 and co-investigator on R21 HL121794, RO1 HL 119201, RO1 HL081823. As an Officer of the American Thoracic Society, Dr. Malhotra has relinquished all outside personal income since 2012. ResMed, Inc. provided a philanthropic donation to the UC San Diego in support of a sleep center. Dr. Liang is a sub-investigator for Astra-Zeneca and Actelion, both not relevant to this article.

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